

CLASSIFICATION CONFIDENTIALCENTRAL INTELLIGENCE AGENCY  
INFORMATION FROM  
FOREIGN DOCUMENTS OR RADIO BROADCASTS

REPORT

CD NO.

STAT

COUNTRY Orbit Countries

SUBJECT Scientific - Miscellaneous

DATE OF  
INFORMATION 1953-1954HOW  
PUBLISHED Newspapers, periodicals

DATE DIST. 25 Jun 1954

WHERE  
PUBLISHED As indicated

NO. OF PAGES 14

DATE  
PUBLISHED 28 Jun 1953-12 May 1954

LANGUAGE Various

SUPPLEMENT TO  
REPORT NO.

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NEWS ITEMS ON SCIENCE IN ORBIT COUNTRIES

Number 4

Agriculture

POLISH VETERINARY SERVICES IMPROVED IN 1953 -- Warsaw, Trybuna Ludu, 29 Apr 54

According to Jerzy Korzeniewski, director of the Central Veterinary Admin-  
istration (Centralny Zarzad Weterynarii), there were only a few veterinary clinics  
in Poland immediately after World War II. However, by 1947 Poland had 110 such  
clinics, by 1952 803 clinics, and by 1953 1,000 clinics. At the end of the Six-  
Year Plan (i.e., 1955), the number of veterinary clinics will reach 1,500.

Veterinary services increased tremendously in 1953. The number of pigs  
inoculated for erysipelas increased from 5,860,000 in 1952 to 8,470,000 in 1953.  
The number of chickens inoculated against the plague increased from 3,760,000  
in 1952 to 10,100,000 in 1953.

ChemistryLACK OF CHEMICALS RETARDS GDR SAFETY-FILM PRODUCTION -- Berlin, Bild und Ton,  
Feb 54

Lack of certain chemicals [not further identified] necessary for the pro-  
duction of safety film has greatly retarded production since World War II.  
Nitro-film, which is currently used, is dangerous because it yields poisonous  
gases when it burns. -- Hans Mager, Dresden

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HUNGARIAN FACTORY MAKES VARIETY OF LABORATORY EQUIPMENT -- Budapest, Esti  
Budapest, 25 Mar 54

The Laboratory Equipment Factory (Laboratoriumi Felszerelés Gyara) operates in 16 shops in the IX district of Budapest. Under the direction of Imre Rona, age 52, the factory makes the Warburg apparatus for measurement of cell respiration, the Pensky-Martens apparatus for determining flash point, an apparatus for determining solidification point, microanalytical scales, and vacuumsopes.

Research institutes in Peiping, Sofia, Berlin, Bucharest, and Kiev are using equipment produced by the laboratory.

Engineering

CZECHS USE ANHYDRITE AS BINDER FOR CONSTRUCTION MATERIALS -- Bratislava,  
L'ud, 12 Jan 54

The Horne Srnie Research Institute has discovered that when anhydrite is ground to a very fine powder and mixed with small quantities of an accelerator it forms a suitable binder to be used in the construction industry. Anhydrite can thus replace lime and in some instances can be used in place of mortar. Also, it has an advantage over other construction binders since it does not have to be slaked or heat-treated.

CZECHS UTILIZE WASTE OF PAPER INDUSTRY -- Prague, Svobodne Slovo, 3 Feb 54

The Cellulose Industry Research Institute in Bratislava has been successful in utilizing waste products from the production of cellulose which pollute rivers. In a small experimental plant the institute is producing a fodder from the waste cellulose, using a fermentation method. The resulting product is rich in albumin and has shown excellent results in test feedings of hogs and bees.

Geology

GEOLOGICAL PROSPECTING IN CZECHOSLOVAKIA -- Prague, Lidova Demokracie, 16 Jan 54

Since 1951, Czechoslovak geological research has revealed unused and partly used deposits of iron ore. In Slovakia some old and primitive abandoned mines have been reopened and found to contain rich deposits of siderite and ankerite. Copper has been found in the Krusne Hory Mountains. Various hitherto unknown deposits of pyrites have also been found in the recent period of emphasis on intensified prospecting. The latest development is concerned with the extraction, by chemical means, of gold from telluride ore.

DEVELOPMENT OF POLISH STATE GEOLOGICAL SERVICE SINCE 1951 -- Warsaw, Drogownictwo, Apr 54

[Article (4 pages) discusses the general organizational development of the state geological service in Poland, from 8 October 1951 to the present. The purpose and tasks of this organization are specified. Included also are the organs set up to fulfill these tasks. References to laws appearing in the Polish legal periodicals pertaining to the state geological service are also given.

(More information available.)]

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SOVIET DOCTORS REPAIR PHARYNX AND ESOPHAGUS BY PLASTIC SURGERY -- Moscow, Vechernyaya Moskva, 15 Aug 53

[In an article on plastic surgery, it is stated that Soviet surgeons are the first to have devised and applied a procedure for repairing or replacing either the pharynx or the walls of the esophagus, or both, by plastic surgery. The article is devoted to the various uses of the "Filatov stem," a rope graft, in repairing damaged or lost parts of the body. In this case, the successful reconstruction of the pharynx and upper esophagus of a young woman, using a rope graft and transplanted cartilage, is described. The article states that the rope-graft process, combined with bone transplantation, is also being used to provide new fingers for digital amputees; the new fingers are made movable by attaching the severed tendons to them with silk thread.]

TBILISI PHARMACEUTICAL PLANT SOLE PRODUCER OF SEVERAL SOVIET MEDICAMENTS -- Tbilisi, Zarya Vostoka, 16 Aug 53

The Tbilisi Chemicopharmaceutical Plant has received the first consignment of wild apples from which it will manufacture a valuable therapeutic preparation, an extract of ferric malate. An infusion of this extract is an excellent homostatic agent. During 1953, the plant, which is the sole producer of this preparation in the USSR, will manufacture several tons of it. The plant is also the sole producer of tannin, tannalbin, gallic acid, and aloe extract. The latter is prepared according to Filatov's method, and put up in ampoules for use in the treatment of certain eye diseases. During 1953, the plant will provide the country with 6 million ampoules of aloe extract. The plant also prepares more than 50 other medicaments.

STUDY OF MEDICINAL RESOURCES OF AZERBAIDZHAN -- Moscow, Meditsinskiy Rabotnik, 23 Apr 54

Baku -- A joint meeting has been held by the Pharmaceutical Faculty of the Azerbaydzhan Medical Institute and the [Azerbaydzhan] Republic Scientific Pharmaceutical Society, the aim being to study the medicinal resources of Azerbaydzhan. Professors and teachers of the Medical Institute, pharmaceutical workers of the Baku Chemicopharmaceutical Plant and the plant for endocrin preparations, as well as representatives of the Ministry of Health Azerbaydzhan SSR, were present. The meeting discussed ways to increase scientific research activities in fields of the study, utilization, and introduction of new medicinals into medical practice.

BLOOD TRANSFUSION AND BLOOD SUBSTITUTES -- Moscow, Meditsinskiy Rabotnik, 9 Apr 54

Prof A. N. Filatov, one of the leading scientists of the Leningrad Institute of Blood Transfusion, spoke before the Scientific Council of the Ministry of Health RSFSR, reviewing the scientific work done at the institute during 1953. He dealt especially with the need for discovery of new blood substitutes suitable for use in all blood types. The blood of horses and cattle is being studied for this purpose. There also will be emphasis on new blood-conservation methods. In the laboratory, blood now can be kept as long as 70 days. More than 500 tests have already been made clinically with aminoproteins, and these have shown themselves very suitable. Another new substance to be tested is the antianemic preparation "antianemin" (Soviet Kampalon MZh). Another valuable preparation has been obtained from the livers of whales and dolphins. The entire staff of the institute will be working on these problems.

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INCREASED COST OF SOVIET MEDICAL SERVICES -- Moscow, Meditsinskiy Rabotnik,  
9 Apr 54

Tatarsk, Novosibirskaya Oblast -- The plenum of the [Tatarsk] Town Committee (Gorkom) of the CPSU met to consider ways and means to improve medical service to the population. The secretary of the town committee, Alan'in, spoke on the increased cost of such service in the past 3 years: it now amounts to 25% of the entire rayon budget. The plenum, however, refused to grant additional funds, claiming that the town leader (Tarasov) and the rayon leader (Kondakov) did not avail themselves sufficiently of the help of medical cadres, and that the cost to the patients was excessive because physicians could have made better use of the feldsher stations and their stock of drugs and instruments.

MEDICINAL PLANTS -- Moscow, Meditsinskiy Rabotnik, 20 Apr 54

Nearly 18,000 varieties of medicinal plants are being cultivated in the herbarium of the Tbilisi Scientific Research Chemicopharmaceutical Institute of Georgia. A new policy inaugurated by the institute sends groups of scientific associates of the institute to search for pharmaceutical plants rich in alkaloids, glucose, and tannin, and to bring them to the institute for acclimatization.

CHOLERA REPORTED IN BULGARIA -- Athens, Estia, 24 Apr 54

The Greek Minister of Welfare has announced that according to unverified reports, cholera cases have been noted in Bulgaria. He said that his ministry has taken all necessary measures to prevent any possible danger. He also said that up to the present no official confirmation of the report has been made and that therefore there is no need for anxiety.

NEW ADVANCES IN CZECHOSLOVAK MEDICAL SCIENCES -- Prague, Svobodne Slovo,  
23 Jun 53

Dr Otakar Ruzicka of the Surgical Department of the Doctor Budin Hospital in Prague, aided by physicists, technicians, doctors, mechanics, and electricians, has designed a prototype of an apparatus which will guarantee safe narcosis. The new apparatus, called the "oxymeter," is based on the principle of measuring the quantity of oxygen present in the blood stream by reflected infrared light. The quantity of infrared light passing through the ear lobe is measured by an attachment weighing a mere 26 grams and consisting of an illuminating device, red light filter, and photoelectric cell, which is suspended from the patient's ear lobe. A wire then transmits the data to electronic components which record the information on a special device. [Photograph of oxymeter with attachment fastened to ear of surgical patient shown.]

LARGE-SCALE VACCINATIONS CARRIED OUT IN CZECHOSLOVAKIA -- Prague, Lidova  
Demokracie, 15 Jan 54

Preventive vaccination in Czechoslovakia during the third quarter of 1953 consisted of 89,000 vaccinations for diphtheria, 50,000 for tuberculosis, 47,000 for smallpox, 21,000 combination vaccines for diphtheria and whooping cough, and over 11,000 vaccinations for typhoid and paratyphoid.

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CZECHS CITE SUCCESSES IN FIGHT AGAINST TUBERCULOSIS -- Prague, Prace, 17 Jan 54

Every okres in Czechoslovakia has an outpatient clinic with at least one tuberculosis department. Only one okres in northern Slovakia [unspecified] is currently without such facilities. Mass X-ray examinations and preventive inoculations have contributed to the improvement of the national health. Every infant is inoculated against tuberculosis a few days after birth. The average age of tuberculosis patients has risen by 12.6 years. In 1948 the child tuberculosis death rate was 612 [per 100,000 children?]; during the first half of 1953, the figure dropped to 40, mainly because of the use of antibiotics and preventive care.

Pardubice, Zar, 5 Feb 54

The Czechoslovak tuberculosis death rate has decreased considerably over the past years from 110 deaths in 1937 (per 100,000 population) to 75 deaths in 1951 and is still falling. Between July 1948 and August 1949, some 2,045,392 children and young people were inoculated against tuberculosis. This preventive inoculation has been quite successful. In 1952 only eight persons died of tuberculosis in Prague; none of the eight had been inoculated. The Gottwald State Tuberculosis Therapy Center at Kosumberk, one of the largest in Czechoslovakia, was operating at only 70 percent of capacity in 1953, due to the phenomenal decline in child tuberculosis.

SIMPLE GDR DEVICE MEASURES X-RAY INTENSITY -- Berlin, Wissenschaftliche Annalen, Mar 54

Dr Simon of the Institute for Solids Research has developed a simple but effective X-ray meter using a cadmium-sulfide crystal placed in an evacuated retort of X-ray-permeable glass and provided with gold electrodes. A constant dc potential of 30 volts is applied to the anode. The current which flows upon radiation is measured with a sensitive instrument with two ranges (0.1 and 1.0 milliamperes, respectively, full deflection). The sensitive area of the crystal varies from 0.3 to 1.5 sq mm. The first successful tests were conducted with the help of Dr Huber on X-ray apparatus used at the Tumor Clinic of the GDR Academy of Sciences in Berlin-Buch.

1953 WORK OF POLISH SCIENTIFIC COMMITTEE FOR POPULARIZING PAVLOV -- Warsaw, Nauka Polska, Jan-Mar 54

During 1953, the work of the Committee for Popularizing Pavlov's Theories, of the Polish Academy of Sciences, included (1) planning and coordinating scientific projects, (2) training personnel, (3) popularizing Pavlov's theories, and (4) working out actual theoretical problems.

The committee investigated the following problems; speech defects caused by damaged brain centers; the physiology of work and physical behavior, such as effects of high temperatures on the human organism and the effects of ultra-violet waves; and the cortical regulation of the circulatory and digestive systems.

Work was also started on the following activities: psychomorphology in clinics for neurology, neurosurgery, and psychiatry; empirical methods of therapy; problems of psychosomatics and Freudianism; Pavlov's theory of the whole; psychic hygiene; etc.

[More information available.]

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RUMANIAN SCIENTISTS DISCOVER ASPIRIN SUBSTITUTE -- Istanbul, Cumhuriyet, 12 May 54

Vienna, 11 May -- According to a report from the Agerpress Agency, Rumanian scientists have discovered a new medicine that is more effective and less toxic than aspirin. This new medicine, called Salicyamide [salicylamide?], has no deleterious effect on the action of the stomach or the bowels.

Metals

SOVIET PROBLEMS IN METALLURGICAL RESEARCH -- Berlin, Wissenschaftliche Annalen, Mar 54

At the plenary meeting of the GDR Academy of Sciences at Berlin on 30 November 1953, the guest speaker, Prof I. P. Bardin, vice-president of the Academy of Sciences USSR, stated that theoretical research in the field of metallurgy in the USSR is unsatisfactory. Those areas where theoretical work has been particularly weak are the dynamics of motion and the distribution of materials and gases inside blast furnaces; the infrared firing of furnaces; the combining of metals in the process of welding; and the thermal processes in continuous casting.

CZECHS DEVELOP SUBSTITUTE FOR NONFERROUS METALS -- Prague, Svobodne Slovo, 16 Dec 53

The Czechoslovak metallurgical industry has developed a new substitute for certain nonferrous metals. The Klement Gottwald Ironworks at Vitkovice began production of a type of malleable casting which differs from the normal type of casting by its suitability as a substitute for such metals as bronze. The price of the new casting is less than one half that of bronze. In 1954 a new department devoted entirely to the production of the new material is to be set up at the ironworks. The new metal can be successfully used in bearings, etc.

Minerals

CZECHS PRODUCE RARE ELEMENT -- Prague, Zemedelske Noviny, 20 Jan 54

A group of scientific workers from the Geological Institute in Prague, comprising Josef Svasta, Engr Dr Lubomir Zahradnik, Zdenek Sulc, Engr Miroslav St'ovik, Robert Rottr, and Miroslav Boubertle, have completed their research on traces of rare elements contained in Czechoslovak minerals. Czechoslovak earths contain traces of indium, samarium, yttrium, niobium, tantalum, germanium, and gallium. The above workers have managed to isolate one of these metals (unidentified) in sufficient quantity to warrant passing it on to other institutes for further research and adaptation. The element [germanium?] is reported as being of value to the electronics industry.

NEW CZECH URANIUM CENTER UNDER CONSTRUCTION -- New York, Staats-Zeitung und Herold, 23 Mar 54

The Czechoslovak town of As is being turned into a uranium mining center. Border crossers report that work brigades and engineer troops are rebuilding the ruined houses in As and vicinity. A fairly large number of technicians and workers have arrived at Dolni Reuth to prospect for pitchblende. It has also been observed that the Czechs are no longer blowing up houses in the Sudeten districts, but are taking them down carefully and shipping the building materials to As.

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CZECHS FIND NEW URANIUM DEPOSITS -- New York, Staats-Zeitung und Herold,  
2 May 54

Czechoslovak authorities are now prospecting for uranium and other valuable minerals in the old mines near Zuckmantel in the Praded Mountains. These mines used to yield ores, gold, and precious stones before they were abandoned. Recently pitchblende was found there, and mine shafts which had collapsed are being rebuilt in the course of prospecting operations.

SUBSOIL EXPLORATIONS IN RUMANIA -- Paris, La Nation Roumaine, 15 Feb 54

According to the ECO [not further identified] Agency, teams of Rumanian and Soviet mining engineers are prospecting in Rumania. Rich deposits of metallic ores were discovered, particularly in Northern Transylvania, and an important natural gas pocket was located near Alba Julia. Uranium deposits were discovered near Fagaras.

Paris, La Nation Roumaine, 1 Apr 54

According to the SOP [not further identified], exploitation of the uranium deposits discovered near Fagaras will start as soon as the snow has melted.

#### Mining

CZECHS PRODUCE NEW PROTOTYPE OF COAL COMBINE -- Bratislava, L'ud, 16 Jan 54

Engr Karel Jupa, an employee of the Department for the Development of Mechanization of the Ostrava-Karvina [Coal] Region (Oddeleni Vyvoje Mechanizace Ostravsko Karvinskeho Reviru), has completed a prototype of a new coal combine for use in slanting and overhanging coal seams. Jupa also built a new type of steel ceiling brace which is better than those imported. The ceiling brace will be tested during 1954.

#### Nuclear Physics

ATOMIC SCIENTISTS TO RETURN TO GDR FROM USSR -- Stockholm, Svenska Dagbladet,  
28 Apr 54

Headed by Prof Manfred von Ardenne, a number of German atomic scientists, who after World War II voluntarily went to the USSR, are expected to return shortly, to the GDR, where they will work in newly established nuclear physics laboratories. The East German authorities have drawn up an extensive development program for atomic physics which will be pushed through with the aid of Soviet capital. The first atomic reactor has already been built at the uranium center in Aue. According to an agreement between Moscow and the East German government of September 1953, the USSR will get all the plutonium produced, while the GDR will only get radioactive isotopes for technical and medical purposes. East German mines are said to supply the USSR with one fourth of its supply of uranium.

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FORMER CANADIAN PROFESSOR (NOW IN POLAND) OPPOSES HYDROGEN BOMB -- Moscow, Znaniye-Sila, Feb 54

[Leopold Infeld, professor of physics at Warsaw and former instructor in applied mathematics at Toronto University, is the author of a one-page article, written in response to a telegram from Claude Morgan, about the "frightful" dangers of hydrogen bombs and about the necessity of opening negotiations for the prohibition of such weapons.]

EXPLANATION OF NUCLEAR PHYSICS FOR SOVIET YOUTH -- Moscow, Tekhnika-Molodezhi, Feb 54

[O. Lozhkin, scientific associate of the Radium Institute of the Academy of Sciences USSR, presents a 4-page nonmathematical exposition of nuclear physics. This article is a rather thorough treatment of the subject although intended for the young readers of this popular scientific monthly.]

CHINESE INVESTIGATE FISSION OF NUCLEI UNDER THE ACTION OF NEUTRONS -- Moscow, Priroda, Feb 54

Experiments have been conducted at the Institute of Modern Physics, Academia Sinica, by Ho Che-hoi, associate of the institute, using the method of thick-layer photoemulsions. He showed that 21-mev neutrons suggested by Bohr and Wiler are incapable of causing the fission of nuclei having mass numbers between 182 and 209 (bismuth, lead, gold, platinum, and tungsten), but rather that higher neutron energies (24-29 mev) are required, in agreement with the earlier theoretical findings of Prof Ch'ien San-ch'iang, Director of the institute, as published in Journal de Physique et le Radium, No 1, 1948.

#### Physics

GETS GDR NATIONAL PRIZE FOR INFRARED WORK -- Belin, Bild und Ton, Nov 53

Dr Rudolf Borchert, technical head of the VEB [People-owned enterprise] Incandescent Lamp Works, received the National Prize Third Class (for accomplishments in the field of film technology and related sciences) in recognition of his contribution to the development of a process for manufacturing infrared searchlights using indigenous raw materials. This development makes possible the large-scale use of infrared techniques in the GDR.

GDR SCIENTIST DISCUSSES USE OF CESIUM CELL FOR SOUND RECORDING ON COLOR FILM -- Berlin, Bild und Ton, Jan 54

The cesium-antimony cell is superior to the ordinary cesium oxide cell, being sensitive substantially beyond the visible spectrum and allowing the color material (not just the silver) in the sound tract to contribute to modulation. It is more economical, has better frequency characteristics, and produces less scratch noises. -- Dr Otto Grabke, Berlin-Karlshorst, DEFA-Kopierwerken (Copying Plant of the German Film Corporation)

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Radio and Television

WIRED RADIO IN CZECHOSLOVAKIA -- Prague, Mlada Fronta, 4 Feb 54

Wired radio is already in full operation in two Prague suburbs, Solidarita and Zelena Liska, with plans for immediate expansion in Vinohrady and Zizkov, as well as in most kraj and okres cities. During 1953 the number of wired radio centers in Czechoslovakia increased by 200,000. Eventually every village will have its own wired radio center. This service, which has a completely independent source of electric power, will be widely available throughout the country at a fee of 45 crowns (installation) and a monthly payment of 5 crowns to defray operating expenses.

Scientists

70TH BIRTHDAY OF SOVIET COMMUNICATIONS EXPERT -- Moscow, Vestnik Svyazi, Apr 54

Valentin Ivanovich Kovalenkov, Doctor of Technical Sciences, Professor, Honored Worker of Science and Engineering, Major General in the Engineering Service, and Corresponding Member, Academy of Sciences USSR, celebrated his 70th birthday on 25 March 1954. Since 1948 Kovalenkov has headed the Laboratory for the Development of Scientific Problems of Wire Communications, Academy of Sciences USSR. In 45 years' activity in the electrical communications field he has published 35 monographs, more than 150 articles, and many other articles of a popular scientific character. He has been granted 76 patents and certificates of authorship for inventions in wire and radio communications, electronic tubes, sound motion pictures, etc. He has been awarded two Orders of Lenin, the Order of the Red Banner, Order of the Red Star, and medals.

[Early biographical details available. Photograph of Kovalenkov shown] -- V. S. Kulebak, Active Member, Academy of Sciences USSR

CZECH SCIENTISTS ARRIVE IN POLAND -- Kielce, Slowo Ludu, 7 Apr 54

Two Czechoslovak scientists, Otto Dub, professor at the Faculty of Hydrology at the Polytechnic [Institute?] in Bratislava, and Frantisek Pompa, professor of the Textile Faculty of the Polytechnic [Institute?] in Prague, have arrived in Warsaw. During their 3-day visit, they will give several lectures in their fields of specialization at institutions of higher learning in Warsaw, Krakow, Gdansk, and Lodz.

NEW MEMBERS OF SLOVAK ACADEMY OF SCIENCES -- Berlin, Wissenschaftliche Annalen, Mar 54

At the full meeting of the Slovak Academy of Sciences on 9 November 1953 in Bratislava, the following were accepted as regular members: Prof Dr A. Mraz of the Philosophical Faculty of the Slovak University; Prof Dr V. Mucha, professor of hygiene in the Medical Faculty of the Slovak University and a leading bacteriologist; M. Maloch, lecturer in agricultural engineering at the College of Agriculture at Nitra, an expert on grazing; Prof Dr D. Andrusov, professor geology and mineralogy at the Slovak University; and Prof Dr L. Ciganek, professor of electronics engineering at the Slovak College of Technology at Bratislava, head of its Department of Electric Machines, and one of Czechoslovakia's leading experts on the design of electric machines.

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HUNGARIAN COAL SPECIALISTS VISITING POLAND -- Krakow, Dziennik Polski, 7 Apr 54

Two Hungarian coal specialists, Dr Odon Konrad of the Ministry of the Coal Industry and Dr Jozsef Horvath of the Mining Institute of Budapest, are visiting in Krakow. The guests have already visited the Main Institute of Mining (Glowny Instytut Gorniczy) in Stalinogrod. In Krakow they will visit the Mining and Metallurgical Academy (Akademia Gorniczo-Hutnicza). They have been comparing and discussing various mining problems.

POLISH SCIENTIFIC DELEGATION GOES TO MOSCOW -- Warsaw, Trybuna Ludu, 23 Apr 54

At the invitation of the Academy of Sciences USSR, a delegation from the Polish Academy of Sciences, composed of Prof Witold Hensel, Prof Jozef Gajek, and Dr Zdzislaw Rajewski, has gone to Moscow. They will participate in a scientific meeting archeological and ethnographic research.

Olzstyn, Zycie Olzstynskie, 24 Apr 54

Hensel, Gajek, and Rajewski left Poland for the USSR on 22 April 1954.

POLISH SCIENTISTS IN CZECHOSLOVAKIA -- Warsaw, Trybuna Ludu, 11 Apr 54

On the invitation of the Czechoslovak Academy of Sciences, a delegation from the Polish Academy of Sciences left for Prague to take part in a general meeting of the Czechoslovak Academy of Sciences, to be held in Prague 11-15 April 1954. The Polish delegation consisted of Prof Dr Henryk Jablonski, Prof Dr Witold Stefanski, and Prof Dr Tadeusz Urbanski.

ROMANIAN SCIENTIST VISITS BULGARIA -- Sofia, Rabotnichesko Delo, 16 Apr 54

On 15 April 1954 at the conclusion of cultural agreements between Rumania and Bulgaria, Prof Benedict Menches, Corresponding Member of the Rumanian Academy of Sciences, Petru Groza, and Sutu Andras, a writer, arrived in Sofia to learn about the achievements of Bulgarian science and the work of Bulgarian scientific institutes.

#### Obituaries of Scientists

JOSEF PODPERA, CZECH BOTANIST -- Brno, Rovnost, 23 Jan 54

On 18 January 1954, Academician Josef Podpera, Czechoslovak scientist and professor of general and systematic botany, died at the age of 75.

EMIL PALUCH, POLISH PROFESSOR OF MEDICINE -- Warsaw, Trybuna Ludu, 21 Apr 54

Prof Emil Paluch died in Lodz on 20 April 1954. He was a member of the PZPR (Polish United Workers Party), a member of the Presidium of the Scientific Council of the Ministry of Health, Rector and Professor extraordinary at the Academy of Medicine in Lodz, and Director of the Institute of Industrial Medicine. He received the State Prize for Science, Second Class; and the Officer's Cross "Polonia Restituta."

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A. B. DROBROWOLSKI, WELL-KNOWN POLISH GEOPHYSICIST -- Warsaw, Trybuna Ludu,  
29 Apr 54

Prof Antoni Boleslaw Drobrowski, well-known scholar and traveler and Titular Member of the Polish Academy of Sciences, died 27 April 1954 in Warsaw. He was born in 1872 and attended the universities of Zurich and Liege. During 1897-1899 he participated in the Belgian expedition to the South Pole under Gerlache de Gomery. He was one of the founders of the Society of Geophysicists (Towarzystwo Geofizykw) in Poland. He also was a co-organizer of the Polish expedition to Spitsbergen. He wrote numerous works on geophysics, including The Natural History of Ice (Historia naturalna lodu) in 1923. Through his research work on crystallization of ice, Drobrowski assured Poland a permanent place in the international scientific world. He continued to work in scientific institutions and in 1953 published his final work, which dealt with the petrography of ice.

Conferences and Fairs

ALL-UNION AGRICULTURAL EXHIBITION IN MOSCOW -- Moscow, Meditsinskiy Rabotni,  
13 Apr 54

On 1 April 1954, the Council of Ministers and the Central Committee of the Communist Party opened the permanent All-Union Agricultural Exhibition in Moscow. The exhibition shows the great achievements of socialist agriculture through the work of kolkhozes, sovkhozes, machine-tractor stations, agricultural societies, and the cooperation of scientific research and experimental institutions. The exhibition covers more than 200 hectares, and is housed in more than 300 buildings, including 76 pavilions. All rayons of the USSR, RSFSR, 16 union republics and Peoples' Democracies are represented. A large map shows the localities from which the most important products come. The pharmaceutical industry is well represented, and the localities where the most valuable therapeutic plants are found are entered on the map. One sovkhoz of the Ministry of Health USSR alone (directed by P. N. Gal'tsev) has 450 hectares of medical plants under cultivation.

GENERAL MEETING OF ACADEMY OF SCIENCES UKRAINIAN SSR -- Moscow, Meditsinskiy Rabotnik, 9 Apr 54

The Jubilee Session of the General Meeting of the Academy of Sciences Ukrainian SSR heard a number of papers on the historical aspects and significance of the union of Russia and the Ukraine. Included among those present at the meeting were G. G. Krotkov, Vice-President of the Academy of Medical Sciences USSR, G. V. Vakhrushev, representative of the Presidium of the Bashkir Affiliate, Academy of Sciences USSR, and V. A. Zheligovskiy, representative of the All-Union Academy of Agricultural Sciences imeni V. I. Lenin. The closing address was given by Academician A. V. Palladin, President of the Academy of Sciences Ukrainian SSR.

MEETING OF SCIENTIFIC COUNCIL OF CHERNOVITS MEDICAL INSTITUTE -- Moscow, Meditsinskiy Rabotnik, 9 Apr 54

A joint meeting was held at the Vizhnits Rayon Hospital by the Scientific Council of the Chernovits Medical Institute, the workers of the oblast health department, and rural physicians of the adjoining rayons. The discussions and papers considered only problems of special local interest: "Prophylaxis and Treatment of Diseases of the Thyroid" (Docent Madnyanskiy), "Suppurating Skin and Other Diseases of Agricultural Workers" (Candidate of Medical Sciences Bukharovich), "Botkin's Disease" (Professor Shchupak), and "Cardiovascular Forms of Rheumatism" (Professor Triger). The meeting was successful in bringing local rural physicians in touch with the latest scientific developments.

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FOREIGN SCIENTISTS ATTEND POLISH MEETING ON CHEMICAL PROCESSING OF COAL -- Warsaw, Nauka Polska, Jan-Mar 54

Section Three of the Polish Academy of Sciences held a scientific meeting from 23 to 25 September 1953 at Gliwice. About 350 scientists attended. The following foreign scientists were present: M. Szyzakow [Shizhakov?], Member of the Academy of Sciences USSR; K. I. Syskov, Doctor of Technical Sciences of the Institute of Mineral Fuels in Moscow; Prof J. Varga, Engineer P. Siklos, Engineer T. Sarudi, and Engineer L. Muller, from Hungary; Prof S. Landa and Dr R. Riedl, from Czechoslovakia; and Prof E. Rammler, Prof A. Lissner, and Dr G. Bilkenroth from the GDR.

Dr Syskov spoke on the "Scientific Basis for the Improvement of the Quality of Coke"; Dr R. Riedle spoke on "High-Pressure Gasification in Czechoslovakia"; Prof M. Szyzakow spoke on "Effects of Pressure in Low-Temperature Destructive Distillation of Solid Fuels"; Prof S. Landa spoke on "Biological Dephenolization of Waste Waters."

[More information available.]

REPORTS PRESENTED AT SCIENTIFIC MEETING FOR CHEMICAL PROCESSING OF COAL -- Warsaw, Nauka Polska, Jan-Mar 54

At a scientific meeting of Section Three of the Polish Academy of Sciences, held 23-25 September 1953 in Gliwice to discuss chemical processing of coal, the following reports were given: "The Raw Materials of the Chemical Industry in Processing Coal in Poland," by Prof Dr B. Krupinski; "Conditions and Perspectives for Developing the Coke Industry," by Prof Dr J. Salcewicz; "Low-Temperature Destructive Distillation of Black and Brown Coal," by Prof Dr B. Rog; "Coal Derivatives From Coke, and Low-Temperature Coal as a Raw Material in the Key Areas of Chemical Industry," by M. Wnek, Master of Engineering; "The Problem of Major Synthesis of Hydrocarbons for the Needs of the National Economy," by Prof Dr Z. Tomasik; "Production of Gas and How to Use It as a Chemical Raw Material," by J. Klosinski, Master of Engineering; "Directions and Tasks in Planning and Constructing Equipment for Chemical Products from Coal," by A. Szpilewicz, Master of Engineering.

[More information available.]

POLISH CONFERENCE ON ULTRASONIC TECHNOLOGY HELD IN WARSAW -- Warsaw, Nauka Polska, Jan-Mar 54

A conference on ultrasonic technology, organized by the Institute of Basic Technical Problems (Instytut Podstawowych Problemow Techniki), Polish Academy of Sciences, was held in Warsaw 26-28 November 1953. The main task of the conference was to exchange ideas and promote cooperation between scientists and the users of ultrasonic equipment.

Twenty nine reports were given covering ultrasonic research in various centers. The reports covered research on ultrasonic converters, design of all types of generators, equipment for navigation, applications of ultrasonic technology to the needs of the national economy, and ultrasonic applications in medicine for therapy and diagnostics.

About 108 persons representing 49 institutes attended the conference.

[The titles of the 29 reports and the names of the authors are listed.]

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HUNGARIAN GEOPHYSICISTS AT MEETING OF POLISH PETROLEUM ENGINEERS -- Krakow, Nafta, Mar 54

At a meeting in Krosno on 20 January 1954, the Association of Engineers and Technicians of the Petroleum Industry (Stowarzyszenie Inzynierow i Technikow Przemyslu Naftowego) welcomed the following Hungarian geophysicists: J. Renner, director of the Lorand Eotvos Institute of Geophysics in Budapest, and L. Fascinay and I. Komaromi, associates of Dr Renner. Among the Polish participants at the meeting were Stanislaw Wais, Sejm deputy; Engineer Wladyslaw Dubis, chairman of the association; Engineer J. Ostaszewski, representative of the Petroleum Institute; and engineers S. Kwolek, S. Plewa, and T. Rokosz, members of the Geology and Geophysics Section of the Petroleum Institute. At this meeting, the participants discussed their experiences and achievements in the technical field.

CONFERENCE ON IMMUNOLOGY HELD IN WARSAW -- Bialystok, Zycie Bialostockie, 2 May 54

About 400 persons attended a nation-wide scientific conference organized by the Warsaw Branch (Oddzial Warszawski) of the Kopernik Polish Society of Naturalists (Polskie Towarzystwo Przyrodnikow imienia Kopernika) and held at Staszic Palace on 24 April 1954. The conference discussed problems in immunology.

Prof Dr Fleck presented a report on how an organism resists virus. Prof Dr Kunicki spoke on the evolutionary development of resistance, from one-celled organisms to humans. Prof Zablocki spoke on achievements in immunochemistry. Docent Dr Makower spoke on the problems created by epidemics.

GENERAL MEETING OF POLISH ACADEMY OF SCIENCES HELD IN WARSAW -- Lodz, Glos Robotniczy, 30 Apr 54

The General Meeting of the Polish Academy of Sciences will be held on 5 and 6 May 1954 at the Staszic Palace (Palac Staszica) in Warsaw. Delegates will report on the activities of the academy during 1953, discuss the plan of scientific activities for 1954, and elect new members.

Scientific Organization

NEW ROENTGENOLOGICAL SOCIETY IN GDR -- Hamburg, Hamburger Abendblatt, 17, 18 Apr 54

On the initiative of Prof Wilhem Lahm, chief of the X-Ray Institute at Chemnitz, a Medical-Scientific Society for Roentgenology has been founded in the GDR. Prof Fritz Gietzelt, director of the Institute of Roentgenology of [East] Berlin University has been elected chairman of the new society.

Notes on Scientific Publications

REFERENCES TO ARTICLES IN UNAVAILABLE ISSUES OF SOVIET PERIODICALS

[The following are articles in issues of Soviet scientific and technical periodicals which are unavailable but are referred to in the sources indicated.]

Article by V. M. Vol'f dealing with nonlinear distortions at high frequencies, appearing in Radiotekhnika, No 2, March-April 1953 (Source: Moscow, Vestnik Svyazi, Moscow, April 1954).

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Letter from N. I. Shteyn, in which Z. I. Zilitinkevich and I. Kh. Nevyazhskiy, as well as B. P. Aseyev's book Vacuum-Tube Oscillators and Transmitters (Lampovyye generatory i peredatchiki), which has been out of print since 1933, were mentioned, appearing in Radiotekhnika, No 6, November-December 1953 (Source: Radiotekhnika, Moscow, January-February 1954).

Article containing description of complete RSL-T (relay connecting lines - thyatron type) units [author not noted, but might be Engineer I. Ya. Eydel'man, Scientific Associate of Central Scientific Research Institute of Communications (TsNIIS), the author of the source article], appearing in Vestnik Svyazi, No 1, January 1952 (Source: Vestnik Svyazi, Moscow, April 1954).

Letters by A. L. Bondarchuk, L. A. Yefremov, and S. G. Voznesenskiy under the heading "On the Quality of Poles for Communications Lines and How to Increase Their Service Life," in which unsatisfactory quality of manufactured poles was noted, appearing in Vestnik Svyazi, No 1, January 1953 (Source: Vestnik Svyazi, Moscow, April 1954).

Article by L. Ya. Kantor and I. Ye. Totskiy, "Measurement of Nonlinear Distortions by the Intermodulation Method," appearing in Vestnik Svyazi, No 2, February 1953 (Source: Vestnik Svyazi, Moscow, April 1954).

LIST OF POLISH MONOGRAPHS AND SERIAL PUBLICATIONS ISSUED BY POLISH ACADEMY OF SCIENCES AND SCIENTIFIC SOCIETIES IN 1953 -- Warsaw, Nauka Polska, Jan-Mar 54

[The titles, authors, publishers, and number of pages per publication are given for 189 publications (monographs and periodicals) which were prepared by institutions, research establishments, committees, and commissions of the Polish Academy of Sciences, as well as organizations subsidized by the academy. These publications cover all fields (historical, political, philosophical, scientific, economic, literary, etc.).

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